RESPONSES BY THE GAS COMPANY, LLC
TO INFORMATION REQUESTS
BY HECO/HELCO/MECO

HECO/TGC-IR-1 Ref: TGC Preliminary Statement of Position, pages 4-5

In order to facilitate the implementation of DG, isn't it appropriate for the regulated electric utility to be an active participant in the DG market? If the answer is no, please explain why not.

TGC Response: No. TGC generally agrees with the majority consensus reached in the Docket 96-0493 electric restructuring docket, to the effect that new or replacement generation in Hawaii, whether it be central generation or distributed generation, should be the subject of competitive bidding. TGC's tentative position is that the utility should not be allowed to engage in such competitive bidding, but that if the utility or its parent wants to create a separately capitalized, separately staffed, non-utility DG affiliate, it may be appropriate to allow this entity to participate in competitive bidding for new or replacement generation along with independent third party suppliers, provided that the Commission adopts and enforces codes of conduct and strict rules for affiliate dealing. TGC believes that the best way for all Hawaii customers to see rate reductions, or at least smaller-than-previous rate increases, from the availability of new, more efficient and/or environmentally benign distributed generating technologies, is for the capital costs for owning and installing new and replacement generation to be excluded from the electric utility's rate base.

In TGC's view, Hawaii's electric generation is already concentrated in the hands of the electric utilities, and TGC does not want to see the electric utilities entering this new, traditionally non-utility, line of business and consolidating an even greater base of power by taking an even larger or potentially total share of the market.

A more level playing field would facilitate other entries into the DG marketplace and therefore facilitate its implementation. As justification for this position, TGC notes that DOD showed at page 45 of its final position statement in Docket No. 96-0493, that even after hypothetical mandatory divestiture, Hawaii generation markets would be still be heavily concentrated, so divestiture simply is not an appropriate structural solution for electric utility market power in this state. However, if the regulators were to deny authority for electric utilities to own future generation and require competitive bidding for new and replacement CG and DG in areas of the system and at times where the planning process shows that *all* ratepayers can benefit, this result would seem to TGC to chart a reasonable and prudent middle course.

Finally, TGC sees another fundamental problem in that the electric rates for commercial and large power service are distorted, thereby creating an artificial demand for "uneconomic CHP." While the electric utilities have attempted to circumvent this problem by introducing a new set of rates for CHP in Docket No. 03-0366, TGC believes that the economic analysis proposed in Docket No. 03-0366 is fundamentally

flawed because it has structured these rates by building on the distorted rates, continuing to use the outmoded policies on cost allocation and rate design, as alluded to in Exhibit C pages 4-6 of that application. This artificial demand for user-sited CHP, coupled with the proposal for other ratepayers to bear all the costs of the projects, could result in the installation of numerous utility-owned, user-sited DG projects where other options might be better for both the individual user and the other ratepayers on the electric utility's system. To the extent that these uneconomic bypass projects might displace existing utility gas load, TGC's ratepayers could be affected as well. For these and other reasons described more fully in its PSOP and IR responses, TGC does not support active participation in utility-owned DG or CHP generation markets by regulated electric utilities.

HECO/TGC-IR-2 Ref: TGC Preliminary Statement of Position, pages 4-5

If DG and CHP systems are beneficial in helping to meet the State's energy goals (e.g., increased energy efficiency and a reduction in the use of fossil fuels), then why would it not be reasonable for a regulated electric utility to be an active owner/operator in the DG/CHP market?

TGC Response: TGC believes that a competitive DG/CHP market has already emerged and was functioning without electric utility ownership (see TGC's response to HECO/TGC-IR-5). Active participation by the regulated investor-owned utilities in the Hawaii DG/CHP market would squelch competition from third-party renewables providers, independent CHP providers, independent power producers, and others. The vertically integrated IOUs in Hawaii possess and freely exert market power in an effort to own or control every kW and kWh of electrical energy and capacity produced or consumed on the islands where they do business. This market power was acknowledged in the Final Statement of Position of Hawaiian Electric Company, Inc., Hawaii Electric Light Company, Inc., and Maui Electric Company, Limited, in Docket No. 96-0493 at ~ p. 40 ("Competition in the retail sale of electric power by "Energy Service Providers" also is not feasible because the existing electric utilities have dominant market shares in their respective service areas that will be difficult to overcome sufficiently to support competition.") and Appendices I, II, III, and IV. Allowing the electric utilities to expand their

existing market power further by entering the traditionally non-utility DG/CHP market would only increase their market power and exacerbate the less-than-perfect market structure that now prevails in Hawaii.

If CHP and DG systems are beneficial in helping to meet the State's energy goals of "dependable, efficient, and economical statewide energy systems," "increased energy self-sufficiency where the ratio of indigenous to imported energy use is increased," and "reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use", TGC believes that it can be achieved as well or perhaps even better by limiting regulated IOUs from owning DG/CHP and reserving these traditionally non-utility markets to competition among third-party suppliers of all generation types. The potential achievement of these energy goals through DG/CHP systems is based on the unit characteristics and efficiency and is independent of its ownership. Such presumed achievement would also be dependent on being achieved at no additional cost to the user of the installation who is driven primarily by economic considerations.

Competitive markets, rather than regulated markets, produce the lowest possible prices for consumers, as competition ensures the most efficient production, minimizes costs and prohibits excess profits. Competitive markets also enhance innovation and excellent services. The Commission recognized that competitively furnished DG had the potential to provide these benefits in Hawaii in Docket No. 02-0051, D & O No.

19773, filed Nov. 15, 2002, in ruling on the HECO companies' interconnection tariffs. It said, "Where feasible and beneficial, the commission encourages and endorses the development and use of distributed generation facilities in the State of Hawaii (State). Such development and use will provide **a meaningful choice for customers.** As noted by the Public Utility Commission of Texas: 'Distributed resources benefit the state by **adding more competitive options**, potentially reducing customer energy, improving the asset utilization of [transmission and] and distribution systems, firming up reliability, and improving customers' power quality.'" (p. 7, footnote omitted, emphasis added). Indeed, competition is the model on which the entire U.S. economic system is built.

HECO/TGC-IR-3 Ref: TGC Preliminary Statement of Position, pages 4-5

a. If a regulated electric utility is permitted to own/operate user sited DG systems, what are the significant impacts on other utilities and utility customers that the regulatory agencies need to consider?

b. What specific regulatory agencies is TGC referring to?

TGC Response:

a. HECO's proposed program focuses on the use of CHP due to its ability to produce both electrical and thermal energy from a single fuel. Avoiding the use of gas for water heating with a diesel-fired CHP system would produce positive economics for the CHP owner but would essentially transfer gas sales to the electric utility.

Allowing the electric utility to take advantage of its already overwhelming market power to offer CHP as a utility service, without cost to the customer, and with a guarantee of energy cost reduction to further influence the decision will result in significant loss of revenue to The Gas Company. Our customers would be forced to bear the burden of the losses through higher rates.

See also TGC response to CA-SOP-IR-67.

b. TGC is referring to the Division of Consumer Advocacy and the Hawaii Public Utilities Commission.

HECO/TGC-IR-4 Ref: TGC Preliminary Statement of Position, pages 5-6

Does TGC believe that the Commission has the appropriate authority to oversee the regulated electric utilities' involvement in DG/CHP projects? If the answer is no, please explain why not.

TGC Response: TGC believes that the Commission has the authority to determine that DG installations, including CHP projects, are not subject to regulated ratemaking treatment. That is, if utilities are allowed to engage in the user-sited DG market as a utility at all, the Commission has the authority to ensure that all costs and expenses associated with these installations are "below-the-line" expenses and not subject to cost recovery and/or rate of return through utility rates.

HECO/TGC-IR-5 Ref: TGC Preliminary Statement of Position, page 2

a. Does TGC acknowledge that to date there has been only a limited number of DG/CHP projects implemented in the State of Hawaii?

b. Does TGC acknowledge that the involvement of the regulated electric utility in the DG/CHP market should result in a larger potential market for DG/CHP installations?

TGC Response:

a. TGC is aware of DG/CHP projects implemented in the State of Hawaii[1] despite the creation of new barriers that hindered DG implementation such as Standby Charges and Customer Retention rates. Although the majority of the above DG/CHP systems were installed since 1999, TGC believes the development of new projects has been stymied since the electric utilities announced their intent to offer utility-owned CHP as described in Docket No. 03-0366.

b. No. The potential market is the market.

[1] Small DG Power Plants (under 50 MW): H-Power, HIRI, Kauai Power Partners, Puna Geothermal Ventures, Hana (MECO)
Micro DG: Ceatech, Kona Village, Bakken Estate.
Micro CHP: Hess (The Orchid, Regency at Hualalai, Hale Pauahi, Ft. Shafter, Kaanapali Ocean Resort, Westin Maui), JCI (Honolulu Hale), Grand Wailea Resort, Pohai Nani, Noresco (Hilo, Kona and Kauai Veteran's state hospitals), Wilcox Hospital (engine chiller w/ heat recovery water heating)
Wind: Big Island – Lalamilo, Apollo, Kahua Ranch, Parker Ranch
Hydro: Numerous locations on Kauai, Maui and Big Island
Solar/PV: Commercial – Parker Ranch, Mauna Lani Bay Resort, Oahu Harley Davidson, Maui Harley Davidson, several schools statewide; Residential

HECO/TGC-IR-6 Ref: TGC Preliminary Statement of Position, pages 3-5

Does TGC acknowledge that utility participation in the DG/CHP market on a regulated basis should lead to a larger market than the current status quo of only a limited number of DG/CHP projects being implemented in Hawaii?

TGC Response: No. See response to HECO/TGC-IR-5b.

HECO/TGC-IR-7 Ref: TGC Preliminary Statement of Position, page 7

Does TGC acknowledge that until the installation of DG/CHP systems increase and there is an adequate track record of these systems' performance, that it would be premature at this time to assert that DG/CHP can delay and/or replace T&D facilities?

TGC Response: See TGC responses to HREA-TGC-IR-1 and HREA-TGC-IR-2.

HECO/TGC-IR-8 Ref: TGC Preliminary Statement of Position, pages 9-10

Does TGC believe that it is prudent for the regulated electric utility to adopt a portfolio type approach to meeting the electric needs of its customers with a combination of DG/CHP resources, central station generation, renewables, demand-side management programs and conservation initiatives?

TGC Response: The Company believes it is prudent for the electric utility to support measures that complement its objectives to reduce energy consumption, increase efficiency and installation of renewable forms of generating electricity. Support does not imply offering the service as a regulated utility. For example, although the utility supports solar water heating, it does not install, own and maintain solar systems as a regulated utility.

HECO/TGC-IR-9 Ref: TGC Preliminary Statement of Position, pages 7-8

For the benefits cited (increasing the State's energy security by diversifying the fuels used, reduce emissions, and the strategic system benefits of DG in the event of system disruptions), in order to help achieve these goals then why shouldn't the regulated electric utility be permitted to contribute to these benefits via owning and operating DG/CHP systems?

TGC Response: See responses to HECO/TGC-IR-1, HECO/TGC-IR-2 and HECO/TGC-IR-8.

HECO/TGC-IR-10 Ref: TGC Preliminary Statement of Position, page 2

In the case where gas facilities are sited on a user's property and are designed and used only to meet the gas needs of that user or property (and are therefore declared non-utility), are the gas facilities tied to the regulated gas distribution grid? If a CHP system is tied to the regulated utility grid, is it possible for the CHP generator to be used for any purpose other than service only to a specific customer?

TGC Response: Non-utility gas facilities sited on a user's property designed and used only to meet the gas needs of that user or property are not tied to the regulated gas distribution grid.

HECO/TGC-IR-11 Ref: TGC Preliminary Statement of Position, page 4

What degree of operational control over customer or 3rd party owned DG is necessary to ensure that reliability is the same as that which is possible when the utility owns and operates the facility and therefore controls the quality and timing of maintenance as well as the dispatch?

TGC Response: TGC believes that unless the output of the DG is contracted to be sold to the utility, the dispatch of a user-sited DG installation is dependent on the user's needs and that utility dispatch control is not necessary. In fact, the interests of the two may conflict where a third party may desire to operate the CHP system as much as possible to generate the largest amount of revenue (or savings), while the utility may not have the same objective.

It is TGC's understanding that the manufacturer and/or vendor of DG facilities typically provide recommended operating and maintenance specifications and practices for the equipment. The equipment comprising a commercial DG/CHP system is normally a prime mover, such as an engine generator, electric switchgear, electronic and computerized controls, heat exchangers, pumps, piping and wiring and sometimes an absorption chiller and cooling tower. This is the same equipment that most hotels and hospitals and many condominiums and office buildings apply as standby gensets, water heating and air conditioning systems. TGC is not aware of any commercial facility that feels compelled to hire the electric utility in order to receive a level of maintenance and

equipment reliability that cannot be achieved by hiring well-established and capable third party service companies. The third party companies depend on offering repair and preventative maintenance services for their livelihood.

TGC is not aware that the electric utilities would necessarily possess, by virtue of their utility status, superior service capabilities or that they will be using their own staff, rather than outsourcing this work to established service companies, if allowed to install user-sited CHP.

HECO/TGC-IR-12 Ref: TGC Preliminary Statement of Position, page 5

a. Should a customer be deprived of the savings available to it by installing a CHP system?

b. Should the other benefits that accrue from the efficiency of a CHP system be foregone because of the potential reduction in gas sales?

TGC Response:

a. TGC believes that the user should be free to choose the DG system that best suits the user's needs and makes sense financially. A customer that installs its own CHP system should be able to take advantage of all the savings afforded to it by the system.

A customer installing a third party CHP should expect to receive all the energy savings to which it agrees to contractually with the vendor.

b. See TGC's response to HECO/TGC-IR-12a.

HECO/TGC-IR-13 Ref: TGC Preliminary Statement of Position, page 5

How much gas utility sales are at risk from potential CHP installations?

TGC Response: The Company has reviewed the amount of gas sold to the market segments that would seem to benefit from a CHP installation and estimates the amount of gas used to heat water that may be at risk to potential CHP installations to represent between 20 to 30 percent of its utility gas sales. Although a CHP system simultaneously provides both electrical and thermal energy, the size of the system and hours of operation are influenced by a number of factors, many of which are unique to each specific project, hence it would be difficult to accurately assess the impact to gas sales without conducting an analysis of each facility.

HECO/TGC-IR-14 Ref: TGC Preliminary Statement of Position, page 5

a. Would gas utility ownership of a CHP installation that replaces electric utility power effectively transfer electric utility sales to the gas utility? Should steps be taken to prevent impacts such as this from occurring?

b. Should the gas utility be prevented from entering the DG market?

TGC Response:

a. The gas utility does not intend to install, own and/or operate user-sited CHP systems.

b. The Company believes that utilities should not be allowed to install, own and or operate a user-sited CHP system.

As the only gas utility in Hawaii, TGC notes that when Congress enacted PURPA, it placed restrictions on electric utility ownership of QFs but no restrictions on gas utility ownership. FERC's regulations and cases implementing PURPA have consistently recognized that gas utility ownership of cogeneration facilities designed to sell power back to the grid presents less of a danger of improper self-dealing and therefore does not need to be restricted the way electric utility ownership did. Be that as it may, on the mainland many gas utility affiliates engage in the business of installing user-sited DG, both within and without the service territories of their parent utility gas pipelines and local distribution

companies. In doing so they are subjected to affiliate rules and codes of conduct.

HECO/TGC-IR-15 Ref: TGC Preliminary Statement of Position, page 1

TGC's Preliminary Statement of Position states: "TGC believes that the DG concerns and potential solutions offered in this proceeding may differ depending on the size and number of units, the number of end users being served, and the uses of the power being generated. Therefore, for purposes of this preliminary statement of position, TGC has examined and responded to the issues as they relate to small-scale distributed generation projects that are located on the end user's property and are primarily designed and used to serve only the electrical needs of that end user or property. However, in the course of this proceeding, TGC may take a position(s) on other types of DG installations."

a. Describe and quantify what TGC considers "small-scale distributed generation projects".

b. Describe in detail TGC's position on each of the issues in this docket as they relate to DG projects that are not "small-scale distributed generation projects that are located on the end user's property and are primarily designed and used to serve only the electrical needs of that end user or property."

TGC Response:

a. TGC considers a project to be "small scale" if the project generates 5 MW or less or the entire output of the generators, no matter what the size and number of individual generators, is consumed "inside-the-fence", as referred to by the Consumer Advocate. Using the

terminology in HECO's PSOP at p. 7, TGC believes that it is addressing Types 1 (without prejudice to the virtual power plant concept proposed by the County of Maui), 4, 5 (to the extent that no excess power is sold into the grid), 6 and 7.

b. With respect to HECO Types 2 & 3 DG, TGC is still formulating its positions and needs to review the responses to its IRs before it can finalize them.

HECO/TGC-IR-16 Ref: TGC Preliminary Statement of Position, page 4

TGC's Preliminary Statement of Position states: "The effect of user-sited DG on utility reliability is no different whether the DG is owned or operated by the utility, by the customer, or by an independent third party. That is, the system reliability and benefits that accrue from user-sited DG are a function of unit characteristics and other external factors that are not related to ownership. Therefore, the effect on utility service is not a justification for the utilities to own and/or operate user-sited DG."

a. Does the performance of operation and maintenance on a distributed generating unit have an impact on the number of hours in which a unit will be available to operate?

b. If maintenance is not performed on a distributed generating unit, could that impact the number of hours in which a unit will be available to operate?

TGC Response:

a. The performance of recommended and regular operation and maintenance on a distributed generation unit does affect the number of hours in which a unit will be available to operate.

b. See response to HECO/TGC-IR-16a.

HECO/TGC-IR-17 Ref: TGC Preliminary Statement of Position, page 6

TGC's Preliminary Statement of Position states: "With regard to small, user-sited DG installations that are not designed or used to deliver power to the electric grid, TGC believes that the impact will be generally limited to ensuring that Commission-approved requirements and any other applicable governmental requirements are met by the user and the electric utilities.

a. Identify all the "Commission-approved requirements" referenced above.

b. Identify all the "other applicable governmental requirements" referenced above.

TGC Response:

a. See TGC response to CA-SOP-IR-72.

b. TGC believes that user-sited DG installations should meet all applicable regulations and requirements governing such installations. Since TGC has not had the need to specifically identify all applicable governmental requirements, it will defer to other parties to provide the information, as it may be required in this proceeding.

HECO/TGC-IR-18 Ref: TGC Preliminary Statement of Position, page 6

TGC's Preliminary Statement of Position states: "With regard to small, user-sited DG installations that are not designed or used to deliver power to the electric grid, TGC believes that the impact will be generally limited to the user. For users also taking firm and/or backup power from the electric utility, TGC believes that the Commission-approved requirements for electric service will prevent most, if not all, potential power quality or reliability disturbances from affecting the electric grid."

a. Identify all the "Commission-approved requirements" referenced above.

b. Is it TGC's position that "small, user-sited DG installations that are not designed or used to deliver power to the electric grid" will have no impact on the utility system? Fully explain your response.

TGC Response:

a. See TGC response to HECO/TGC-IR-17a.

b. TGC believes that as a result of this proceeding, and possibly others, sufficient standards and requirements will be adopted to prevent most, if not all, potential power quality or reliability disturbances from affecting the electric grid.

HECO/TGC-IR-19 Ref: TGC Preliminary Statement of Position, page 8

a. Does TGC believe that engineering and design issues (e.g., interconnection standards) "must be considered to allow a distributed generating facility to interconnect with the electric utility's grid?" Fully explain your response.

b. Identify what TGC believes "must be considered to allow a distributed generating facility to interconnect with the electric utility's grid".

TGC Response:

a. See TGC's response to CA-SOP-IR-72.

b. See TGC's response to CA-SOP-IR-72.